

REMARKS

At the outset, Applicant wishes to thank Examiner Roy for the courtesies extended to Applicant's representatives during the March 15, 2004 telephonic interview. The substance of the interview is incorporated in the following remarks.

Summary of the Office Action

In the Office Action, claims 1-11 and 17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0959542 to *Sugimoto, et al.* in view of U.S. Patent No. 6,114,054 to *Klein, et al.*

Claims 7-11 are indicated as allowable if rewritten to overcome the rejections under 35 U.S.C. § 112 and to include all of the features of their base claims and any intervening claims.

Applicant appreciates the indication that claims 12-16 are allowed over the prior art of record.

Summary of the Response to the Office Action

Applicant amends claims 1, 2, 4, 7, 9, 10, 11, and 17 and adds new claims 18-23. Accordingly, claims 1-23 are pending for further consideration.

All Claims are Allowable

Claims 1-11 and 17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Office Action alleges that overlapping ranges in independent claims 1 and 17 are indefinite. Applicant respectfully submits that these ranges have been divided between

independent claims 1 and 17 and their corresponding independent claims 22 and 23, respectively.

As indicated by Examiner Roy during the March 15, 2004 interview, these amendments should overcome the § 112, second paragraph, rejections. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 112, second paragraph, be withdrawn.

All Subject Matter Complies With 35 U.S.C. § 103(a)

Claims 1-6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sugimoto, et al.* in view of *Klein, et al.* These rejections are respectfully traversed for at least the following reasons.

Applicant respectfully submits that neither *Sugimoto* nor *Klein*, either alone or in combination, teach or suggest a spark plug having at least a “glaze layer . . . between 1 and 9 μm ,” thick as recited in newly amended independent claims 1 and 17.

Sugimoto discloses a spark plug glaze layer formed on an alumina-based insulator constructed of materials with very little or no lead (Pb) constituents that demonstrate resistance to cracking. The glaze can be fired at temperatures as low as 800-950°C, and exhibits flashover resistance. See the abstract of *Sugimoto*.

Klein discloses a method for coloring ceramic surfaces that includes the steps of providing a host lattice material composed of a colorless oxide compound that crystallizes into one of a spinel lattice or a rutile lattice and that may be water-soluble; providing an aqueous coloring solution, a first water-soluble compound including a metal ion that is one of a two-valent metal ion or a three-valent metal ion and that colors the host lattice material, and a second water-soluble compound including a metal ion that is one of a five-valent metal ion or six-valent metal ion and that provides an electrostatic balance; and generating a mixed-phase pigment in the surface of the ceramic mass. See the abstract of *Klein*.

To establish a *prima facie* case of obviousness, three basic criteria must be met (see MPEP §§ 2142-2143). First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art references must teach or suggest all the claim limitations.

The Office Action fails to meet all three of these criteria. First, none of the cited references teach or suggest at least the features of a “glaze layer . . . between 1 and 9 μm ,” thick as recited in independent claims 1, 17, 22, and 23. Support for this feature can be found in the specification at page 22, line 3. Moreover, neither *Sugimoto* nor *Klein* discusses glazing layers that have a thickness in this range. Thus, there is no suggestion or motivation in the references or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, since none of the applied references teach or suggest the above-mentioned features, one of ordinary skill in the art could not reasonably contemplate the invention as recited in independent claim 1, from the teachings of the applied references. Therefore, the Office Action fails to establish that there was a reasonable expectation of success.

Third, as described above, neither *Sugimoto* nor *Klein*, either alone or in combination teach or suggest at least the features of a “glaze layer . . . between 1 and 9 μm ,” as recited in claims 1, 17, 22, and 23. Thus, the cited prior art references failed to teach or suggest all claim limitations.

As pointed out in M.P.E.P. § 2143.03, “[t]o establish *prima facie* obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art”. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). Thus, the Office Action fails to establish a

prima facie case of obviousness at least because it does not teach all the recited claim features.

Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. § 103(a) should be withdrawn because neither *Sugimoto* nor *Klein* teach or suggest each feature of independent claims 1, 17, 22, and 23. Accordingly, Applicant respectfully requests that the rejection of claims 1-6 and 17 under 35 U.S.C. § 103(a) be withdrawn.

Claims 2 and 4 are amended to correct for changes in dependency. Claims 7 and 9-11 are rewritten in independent form to include the features of their base claim and any intervening claims as suggested by the Examiner. Applicant respectfully submits that these claims are now in condition for allowance.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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